

Amendments to the Claims (including presentation of New Claims):

This listing of claims will replace all prior versions of claims in the application.

Listing of the Claims:

Claims 1.-29. Canceled.

30. (New) A method for the diagnosis of Alzheimer's disease in a patient comprising the steps of:

- (1) providing a sample of an appropriate biological fluid from said patient;
- (2) determining the total butyrylcholinesterase in the sample;
- (3) subjecting the sample to lectin binding analysis to determine the amount of butyrylcholinesterase unbound to concanavalin A (ConA); and
- (4) diagnosing the probable presence of Alzheimer's disease in the patient as a direct correlation to the amount of unbound butyrylcholinesterase, wherein the probability of the presence of Alzheimer's disease increases as the amount of unbound butyrylcholinesterase increases.

31. (New) A method according to claim 30, wherein said step of determining the total amount of BChe in the sample is carried out by a method selected from enzymatic activity analysis and monoclonal antibody binding.

32. (New) A method according to claim 30, wherein said step of determining the amount of BChe unbound to ConA is carried out by a method selected from enzymatic activity analysis and monoclonal antibody binding.

33. (New) A method according to claim 30, wherein said biological fluid is cerebrospinal fluid, blood or blood plasma.
34. (New) A method according to claim 33, wherein said body fluid is blood plasma, said method including the step of preparing blood plasma from the blood for analysis.
35. (New) A method according to claim 30, said method further including the steps of:
- (a) determining the total acetylcholinesterase in the sample;
 - (b) subjecting the sample to lectin binding analysis to determine the amount of acetylcholinesterase unbound to ConA and determining the percentage of acetylcholinesterase unbound to ConA;
 - (c) subjecting the sample to lectin binding analysis to determine the amount of acetylcholinesterase unbound to wheat germ agglutinin (WGA) and calculating the percentage of acetylcholinesterase unbound to WGA;
 - (d) determining the ratio of acetylcholinesterase unbound to ConA to acetylcholinesterase unbound to WGA wherein a ratio above about 0.95 is characteristic of Alzheimer's Disease.
36. (New) A method according to Claim 35, wherein butyrylcholinesterase is removed from the sample prior to step (a).